

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (currently amended) A synchronous network, comprising:

nodes transmitting data to one another in a predefined sequence for a predefined duration, a plurality of said nodes outputting a synchronization signal defining a reference time for a synchronization of said nodes, said synchronization signal having a duration which is longer than a maximum signal transit time occurring inside the network, said synchronization signal having at least one of a time profile and a duration that the synchronization signal can be identified as the synchronization signal even if other synchronization signals which are output by different ones of said nodes are overlapping on one another.

Claim 2. (canceled)

Claim 3. (original) The network according to claim 1, wherein the synchronization signal is encoded using one of an NRZ code, a XERXES code, and a Manchester code.

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Claim 4. (canceled).

Claim 5. (currently amended) ~~The network according to claim~~
~~1,~~ A synchronous network, comprising:

nodes transmitting data to one another in a predefined
sequence for a predefined duration, a plurality of said nodes
outputting a synchronization signal defining a reference time
for a synchronization of said nodes, said synchronization
signal having a duration which is longer than a maximum signal
transit time occurring inside the network, wherein a
respective node of said nodes ~~which wishes~~ wishing to
synchronize with one or more others of said nodes initially
observes for a predetermined time to determine whether another
one of said nodes is outputting the synchronization signal or
other data, and, if another one of said nodes is not
outputting the synchronization signal or other data, said
respective node outputs the synchronization signal.

Claim 6. (previously presented) The network according to
claim 5, wherein said respective node wishing to synchronize
with one or more others of said nodes outputs the
synchronization signal during a synchronization phase only if
said respective node has detected that no other one of said
nodes is outputting the synchronization signal or other data.

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Claim 7. (original) The network according to claim 5, wherein said respective node wishing to synchronize with one or more others of said nodes outputs further data which identifies said respective node in a time slot assigned to said respective node after outputting the synchronization signal or receiving the synchronization signal from another one of said nodes.

Claim 8. (original) The network according to claim 7, wherein said respective node wishing to synchronize with one or more of said nodes defines a chronological position of time slots assigned to it as a function of the synchronization signal which is output by said respective node or received by said respective node from another one of said nodes.

Claim 9. (original) The network according to claim 1, wherein the synchronization signal is output in a specific time slot of a time slot cycle used.

Claim 10. (original) The network according to claim 9, wherein the specific time slot is a global time slot in which all of said nodes are allowed to output specific signals and specific data.

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Claim 11. (original) The network according to claim 1,
wherein all of said nodes output the synchronization signal.

Claim 12. (original) The network according to claim 7,
wherein said respective node wishing to synchronize with one
or more others of said nodes defines a chronological position
of time slots assigned to it as a function of the
synchronization signal which is output by said respective node
or received by said respective node from another one of said
nodes and as a function of received data which others of said
nodes have output in their assigned time slots, in order to
identify itself to others of said nodes.

Claim 13. (original) The network according to claim 7,
wherein said respective node wishing to synchronize with one
or more others of said nodes defines a chronological position
of time slots assigned to it as a function of received data
which others of said nodes have output in their assigned time
slots, in order to identify itself to others of said nodes.

Claim 14. (currently amended) A synchronous network,
comprising:

nodes transmitting data to one another in a predefined
sequence for a predefined duration, a plurality of said nodes

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outputting a synchronization signal defining a reference time for a synchronization of said nodes, said synchronization signal having at least one of a time profile and a duration that the synchronization signal can be identified as the synchronization signal even if other synchronization signals which are output by different ones of said nodes are overlapping on one another; and

a respective node of said nodes wishing to synchronize with one or more others of said nodes initially observing for a predetermined time to determine whether another one of said nodes is outputting the synchronization signal or other data, and, if another one of said nodes is not outputting the synchronization signal or other data, said respective node outputting the synchronization signal.